

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY USSR (Ukrainian SSR)

REPORT

SUBJECT Centrifugal Water Pump Type 26
Manufactured by a Hydraulic Pump
Plant in Sumy

DATE DISTR. 6 January 1959

NO. PAGES 1

REFERENCES

DATE OF
INFO.PLACE &
DATE ACQ.

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

the centrifugal water pump "type 26" manufactured by a hydraulic
pump plant in Sumy (N 50-54, E 34-46)

The report includes a sketch of
the various parts of the pump and information on the pump housing, rotors,
rotor shaft, collar plates, water chamber, pump action, and the approximate
dimensions and weight of the pump without motor.

1. Comment: This is probably the Frunze Machine Building
Factory in Sumy which manufactures compressors and pumps.

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STATE	X	ARMY	X	NAVY	X	AIR	15	FBI	AEC						
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CENTRIFUGAL WATER PUMP MANUFACTURED
BY SUMY HYDRAULIC PUMP PLANT

General

1. The Sumy (N 50-55, E 34-47) Hydraulic Pump Plant manufactured a centrifugal water pump referred to [redacted] as "type 26". The approximate dimensions and weight without motor of the pump were as follows: length, 1.50 meters; width, 1.20 meters; height, 1.50 meters; and weight, 1500 kilograms. The pump was driven by an electric motor [redacted] sketch on page 4, and described below. Numbers and letters in parentheses below refer to the aforementioned sketch:

1
2. Pump housing. The upper (A) and lower (B) pump housing were of cast iron and were bolted together by gasketed flanges; the gaskets were made of a special metal called Paranit (sic). The water inlet and outlet were located on opposite sides of the pump housing, with one placed slightly higher than the other so that a line drawn between the two would be somewhat oblique in relation to the rotor shaft.
3. Rotor shaft. The diameter of the machined steel rotor shaft (1) was regular, except that it was smaller where the bearings were attached, and larger where the rotors were attached. Lock pins secured the two rotors (10) to the shaft spline (2). Corresponding lock nuts (3) were secured by crimping them into place with a cold chisel. The two millimeter thick, soft iron, retaining rings (4) had a short flexible tang which was bent into the spline and secured with a lock nut. The retaining sleeves (5) and the bearings, (13 and 6) with one and two sets of bearings respectively were also fixed to the shaft with lock pins and nuts. The retaining sleeves were indented and fitted with lubricating rings (14) which lubricated the bearings by dragging up grease from a grease pan underneath. The rotor shaft was protected from wear by cast iron (sic) bushings, 35 millimeters in length, fixed at the friction points of the shaft between the retaining collars (7) and the baffle plates (9).
4. Collar plates. Two steel collar plates (8) were fitted to the body of the pump and acted as a stop against the pressure of the retaining collars (7) which compressed, between themselves and the collar plates, a stuffing box of asbestos rope (15) wrapped around the shaft, in order to prevent the passage of air or water. The cast iron retaining collars (7) were made in two pieces and bolted together so they could be easily taken apart and reassembled.
5. Rotors. A baffle plate (9) was fixed to the pump shaft on each side of the rotor assembly. These, together with the dividing plate (11) delimited the intake and expulsion compartments. The intake and expulsion rotors (10) were of cast iron, hollow, with helicoidal vanes, one curved to the left, the other to the right. Between the two rotors was a cast iron dividing plate (11) which separated the intake and expulsion compartments. This was fixed to the pump housing by means of a ridge along its circumference which fitted into a slot in the housing.

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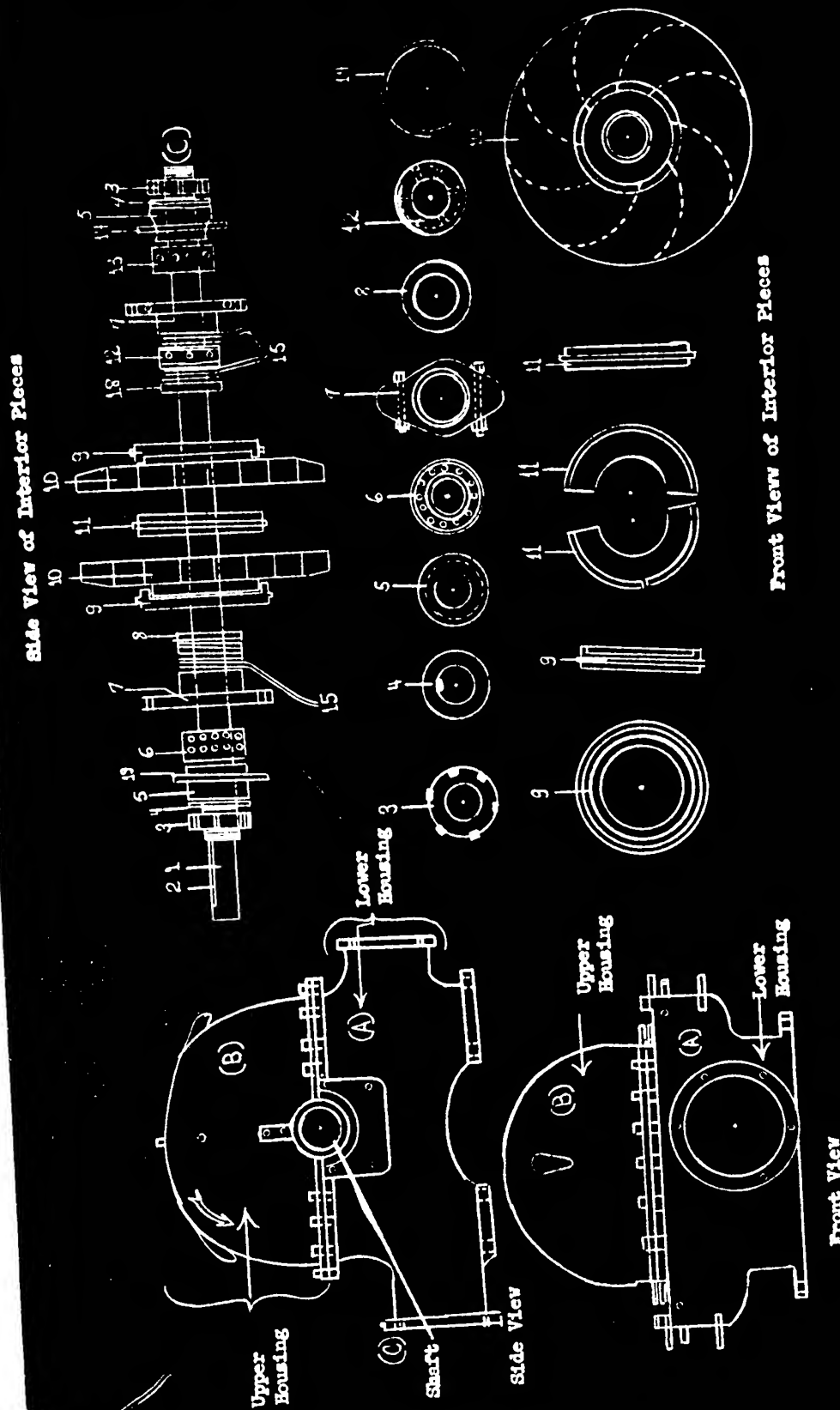
6. Water Chamber. The cast iron, cylindrical, stationary, water chamber (12) was fixed to the pump housing. It was radially drilled to distribute water around its circumference. The water was delivered by means of a pipe independently of the action of the pump. In this manner, air could not enter in the event of breakage or wear of the asbestos rope (15) of the stuffing box.
7. Pump Action. The action of the pump was described as follows: Water was pulled in by the intake rotor which drove it through an orifice into the chamber formed by the upper housing. It was then forced through an orifice onto the drive-off rotor which expelled the water, thus completing the cycle of the pump operation.

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Sketch of
Type 26 - Centrifugal Water Pump

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